

## HENICOPS DOLICHOPUS, A NEW CHILOPOD FROM UTAH.

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In a paper on the Lithobiidae of Salt Lake County, published a short time ago in these Proceedings,<sup>1</sup> the author noted the occurrence in Utah of *Henicops fulvicornis* Meinert, the only form of *Henicops* heretofore reported from North America, although a different species (*Henicops chilensis* Gervais) is known from Chile in South America. The specimens which were at that time, after a partial examination, referred to the species *fulvicornis* have since been restudied, together with more extensive and better material collected during the summer of 1901 from various places in the Wahsatch Mountains, and have been found to consist of two distinct species, of which the more abundant is new to science. *Henicops fulvicornis*, indeed, is represented in these collections by only a few specimens taken at the mouth of Mill Creek Canyon, whereas more than 75 of the new form have been examined. All of the individuals studied, strangely enough, are females; and it may be said that so also Meinert, Latzel, and other European naturalists have failed to find a male of *Henicops* in Europe. The remarks as to habitat, made in the paper mentioned, apply in the main to the new species, an account of which is herewith given.

### HENICOPS DOLICHOPUS, new species.

The more essential differences between the two North American species of *Henicops* now known may be tabulated as follows:

- A. Posterior angles of all the dorsal plates straight or rounded.
  - a. Antennae short, articles 24-29 (mostly 25); anal legs short; length of body 7-11 mm. *fulvicornis* Meinert.
- B. Posterior angles of the 9th, 11th, and 13th dorsal plates strongly produced.
  - a. Antennae long, articles 39-40; anal legs very long; length of body 11.4-12.6 mm. *dolichopus*, new species.

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<sup>1</sup> Proceedings of the U. S. National Museum, XXIV, pp. 21-25

If Stuxberg's subgeneric divisions of *Lithobius* are based upon tenable characters, then the major differences indicated above ought by analogy to rank these two species of *Henicops* in different subgenera.

*Description*.—Body increasing in width from the head backward to the region of the tenth dorsal plate and then again becoming narrower, moderate. The cephalic plate sparsely hirsute with long and short bristles, the first dorsal plates hirsute subsimilarly to cephalic plate, the last few dorsal plates more sparsely provided with hair, the posterior median scuta subglabrous. The ventrum sparsely hirsute with long bristles, more densely posteriorly. Color yellow to brown, the first and the last dorsal plates usually darker, often reddish brown; head frequently very dark, its anterior and lateral portions reddish or chestnut, at times verging to black, middle and posterior portions paler; ventral plates smoky yellow; legs mostly yellow, brown or somewhat reddish brown toward extremities, the posterior pairs darkest; antennæ yellow to brown, reddish brown or chestnut at base. The ground color in all parts subject to modification by a more or less strong violet or lavender tint apparently from deeper tissue, this being particularly strong in the head and in the anterior and the posterior dorsal plates.

Head a little wider than long (ratio 12:11 or less); posterior margin truncate, as is also the narrower anterior margin, the sides convexly rounded; elevate except lateral borders, which are more or less depressed, flat, or concave above. Antennæ long, densely subpilose; articles 39 or 40, when 40 the ultimate articles proportionately shorter; articles short or very short, excepting the large second, and the more or less cylindrical, distally rounded ultimate article, the first three (or four) articles greatest in diameter, the fourth abruptly smaller, and the ten following subequal to it, very short, the fifteenth again abruptly smaller, those succeeding it gradually decreasing in diameter to the end, longer and more freely joined than those preceding. On each side of the head a round, moderately large ocellus at the bottom of a depression on the frontal suture. Prosternal teeth 3-3, small and pale, on each side the two innermost proximate and often elevated together, the outermost being separated by a wider and deeper interval and the prosternal margin beneath it less produced.

The posterior angles of the ninth, eleventh, and thirteenth dorsal plates strongly produced. Dorsal plates convexly arched; each of the larger scuta with five, more or less evident longitudinal sulci, two lateral, parallel one with each side, one median, and two intermediate diverging from each other posteriorly; the two lateral sulci continuous, with a transverse depression or furrow (sometimes double) running parallel with and a little anterior to the posterior margin, corresponding lines often traceable on the head. Ventral plates with one or with two wide and shallow transverse depressions.

Legs hirsute, with long straight bristles; anal pair very long, slender, not at all crassate (female); all feet provided each with three claws, the middle one long and slender.

Coxal pores in one series, round and large; arranged in a rather deep furrow or excavation on the posterior side of the coxa, so that they are mostly invisible in the supine position of the animal; 3, 3, 3, 3-4, 5, 5, 4. Genital forceps of the female with the claw long, pointed, and incurved, without any trace of lateral lobes; basal spines 2-2 or 2-3, stout, conical, the inner spines smallest, in most bent outward above.

Length of body, 11.4-12.6 mm.; width, 1.5-1.7 mm.; length of antennæ, 5.6-6 mm.; of anal legs, 6-6.5 mm.

*Juvenis*<sup>1</sup>—Ground color light brown to yellow, but this mostly hidden by the violet from beneath, the head appearing purple, often very dark; ventral plates likewise violet or lavender, the color becoming deeper posteriorly; antennæ light brown or yellow.

Articles of antennæ 31-36. Prosternal teeth 3-3. Coxal pores moderately large, the groove in which situated more shallow than in mature form, 2, 2, 2, 2-3, 3, 3, 3. Genital forceps short; claw short and pale; basal spines 2-2, short conical points.

Length of body, 8-8.4 mm.; width, 1.2 mm.; length of antennæ, 4.6 mm.; of anal legs, 4-4.2 mm.

*Immaturus*.—Color yellowish brown, the head darker; legs and antennæ smoky white.

In the one specimen of this form obtained the 40 articles of the antennæ are already present, very short, the individual being doubtless exceptional. Prosternal teeth not yet evident. Ocelli distinct, considerably larger than in pullus. External genital appendages not yet formed, but visible as incipient buds. Coxal pores 2, 2, 2, 2, porigerous surface scarcely depressed.

Length of body, 5.5 mm.; width, .65 mm.; length of antennæ, 2.5 mm.; of anal legs, 1 mm.

*Pullus*.—The pulli obtained are of the stage possessing 12 pairs of developed legs, with the remaining pairs appearing as buds. Dorsal plates 12.

Color yellow; antennæ and legs white. Articles of the antennæ 25-32. Ocelli small, colorless. Coxal pores 1, 1, 1, 1, very small.

Length of body 3-4.6 mm.; length of antennæ 2.1-2.5 mm.

*Type*.—U.S.N.M., No. 787.

*Habitat*.—Wahsatch Mountains at elevations from 6,000 to 10,000 feet above sea level. Under wood and stones along streams, about springs, and near melting snow, but also not uncommon under the fallen logs of the pine and quaking aspen forests away from running

<sup>1</sup>The terms indicating immature stages of growth are here used as by Latzel. See *Die Myriapoden der Ost.-Ung. Monarchie*, Pt. 1, pp. 37, 38.

water. Specimens were obtained at many points between Farmington Canyon, Davis County, and Spanish Fork Canyon, Utah County, south of which place none was found.

The author also has in his collection a number of specimens of *Henicops* taken by his brother, Prof. W. H. Chamberlin, at the head of Chalk Creek, in the Uintah Mountains, which prove to belong to the same species as those from the Wahsatch. It is, consequently, very probable that the range of this species is carried eastward by the Uintahs into the Rockies.